



CONFIDENTIAL
INVENTION DISCLOSURE FORM

Date: [REDACTED]

1. Assigned Numbers: Project No. _____ Invention Disclosure No. _____
Law Department File No. 1415
Outside Patent Counsel Docket No. _____

2. Title of Invention: Java Persistence Framework

3. Summary of the Invention:

The Java Persistence Framework is a framework that provides separation of Business and Domain objects, along with an isolation from specific database implementations. The JPF currently provides its capabilities by combining the use of TOPLink and Versant into a single interface.

4. Inventor(s):

a. Dwayne Smith	c. Kemi Ibitayo	e. Joey Levi
b. James Tucker	d. Scott Terrell	f. Jason Pringle

5. Earliest written description of the invention (by date and location) (attach a copy):

Sprint, LDD, Technology Services, BITS/NOSM. BTA
Irving, TX
[REDACTED]

Persistence framework that provides a Java interface to decouple the storage of data from a specific database vendor.

6. Potential commercial use(s) for the invention:

As a persistence framework used by an Enterprise that would like to separate the storage of data from a particular database vendor and/or use two or more database vendors within an application and have a common interface to all databases.

7. Is the invention ready for commercialization? (circle)

Yes

No

If No, describe status of the invention:



8. Has the invention been disclosed or offered to anyone?

(circle)

☒ Yes

☐ No

If Yes: Date(s) Various data between [REDACTED]

It was disclosed for review to several people as part of the internal review process. The reviewers were:

- a. Wayne Lund (Contractor - Anderson Consulting)
- b. David Nunn (Contractor)
- c. Wes Enochs (Contractor)



9. Describe the closest prior art (external and internal)
(Refer to published literature, patents and internal written information.
Attach copies if available):

Prior art required either of the following strategies:

- Use the Database vendor calls directly to create, retrieve, update, and delete data.
- Wrap the Database vendor calls with your own APIs that calls the vendor specific APIs to create, retrieve, update, and delete data.
- Most mapping tools including TOPLink support the use of multiple relational databases through the same APIs to create, retrieve, update, and delete data.
- JDBC is an API standard for drivers that allow access to a wide range of SQL databases. This allows applications running on a Java platform to access different databases with the same API call.
- The Java Versant Interface (JVI) is Versant's set of APIs that are use to create, retrieve, update, and delete data.
- Open Database Connectivity (ODBC) allows access to different database languages through the same set of APIs.

10. What advantage(s) does the invention have as compared to the prior art?

- Provides a single interface to perform database manipulation that would otherwise require the 2 more separate interfaces. (i.e. It encapsulates the capabilities of the TOPLink and Versant API into a single interface.)

11. What problem(s) does the invention solve?

- Allows applications to have unique databases. So that if one application uses TOPLink and another uses Versant the programs can use the same APIs calls.
- Gives application developers the ability to code without having to know the specifics of the database they are using.
- Allows for the ability to added another database implementation to the JPF.

12. Please provide a detailed description of the invention:
(Attach summary technical reports or memoranda, tables, figures, equations, etc.)

See the following attachments:

JPF_Class_diagram.doc

Java_Persistence_Framework_Overview.ppt



13. For computer software inventions,

- a. Please provide a flow chart of all software routines. In addition, please provide both a paper copy and a diskette copy (preferably in MS Word format) of the complete source code listing.

Please see the attached Java files:

DatabaseException.java
DatabaseWrapper.java
DatabaseWrapperBase.java
DatabaseWrapperException.java
DatabaseWrapperTOPLinkImpl.java
DatabaseObjectFactory.java
DatabaseObjectFactoryTOPLinkImpl.java
FactoryException.java
OptimisticLockException.java
PersistenceException.java
ServerSessionHolder.java
TOPLinkConfigurator.java
TOPLinkConfiguratorException.java
TOPLinkConstants.java

- b. If the software is tailored to a specific technical subject matter (e.g., a particular area of chemistry, electronics, aviation, biotechnology, etc.), please provide a detailed description of the pertinent subject matter.

The JPF is tailored to the creation, retrieving, updating and deleting of Java objects in databases without having to know vendor specific APIs.

- c. Are alternative means (e.g. hard wired circuitry) available to accomplish the function of the software? If so, please provide a complete description.

There is no alternative means to accomplish the all of the functionality of the JPF that we know of at this time.

- d. Please provide a description of all hardware (e.g., specific microprocessor, peripherals, etc.) necessary to run this software.

This software can be run on any computer capable of running a Sun Java virtual machine, version 1.1 or higher. A typical configuration is described below:

Intel x86 Architecture Computer
Microsoft Windows 98 or Windows NT
Sun JDK or JRE 1.1x or higher installation with the java.exe or jre.exe executables
Oracle8 Enterprise Edition Release 8.0.5.1.0 - With the Objects option
TOPLink 2.01



14. Inventor(s): Dwayne Smith _____
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Signature: _____

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15. Reviewed and understood by:

Name: Marty Hill _____

Philip Issa _____

Signature: _____

Date: _____

Return this form and any attachments to:

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